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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,630	04/22/2004	Dennis R. Raffaeli	INL-00059	7299

7590 04/13/2005
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EXAMINER

NGUYEN, DUNG V

ART UNIT PAPER NUMBER

3723

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,630

Applicant(s)

RAFFAELLI, DENNIS R.

Examiner

Dung V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 2,8-14,16,22-28,30 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,15,17-21,29 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/26/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of species 1, claims 1, 3-7, 15, 17-21, 29 and 31 in the reply filed on 4 February 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 15, 20, 29 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Robichon (USPN 5,846,125). Robichon discloses a rotary edging wheel and method of use comprising a hub portion operable for attachment to rotary power source, an outer circumferential cutting surface 7 having a width, the surface 7 including abrasive grit (cubic boron nitride) 10 attached thereto, at least one pair of grooves 11 formed in the surface 7 comprising a first groove extending at an angle across the surface, a second groove extending at an angle across the surface, wherein the first and second grooves are angled either towards each other or away from each other and extend continuously across the surface 7, wherein the abrasive grit 10 is attached to the wheel by resin bonding (note Fig. 1 and 2, col. 1, lines 24-42, col. 2, line 58 to col. 3, line 44).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robichon (USPN 5,846,125). Robichon discloses the claimed invention as described above, however, Ribichon does not disclose each groove has an angle of from about 10 degrees to about 80 degrees, about 15 degrees to about 65 degrees, about 35 degrees to about 45 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select each groove has an angle of from about 10 degrees to about 80 degrees, about 15 degrees to about 65 degrees, about 35 degrees to about 45 degrees, since it has been held that where the general conditions of a claim is disclosed in the prior art, discovering the optimum or workable ranges involve only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Claims 7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robichon (USPN 5,846,125) in view of Wu et al (USPN 6,047,278). Robichon discloses the claimed invention as described above, however, Ribichon does not disclose the abrasive grit is comprised of diamond hardness grit. Wu et al discloses that cubic boron nitride and diamond are well known superabrasive. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute cubic

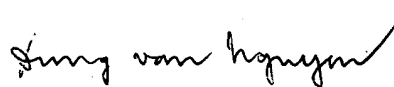
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boron nitrate of Robichon with diamond as disclosed by Wu et al in order to provide user with additional abrasive material for grinding wheel.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sherk, Held, Waller et al, deGraaff and Raffaelli are cited to show a rotary wheel having grooves.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 571-272-4490. The examiner can normally be reached on M-F, 7:00-3:30.
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN
April 11, 2005


DUNG VAN NGUYEN
PRIMARY EXAMINER